

NOTES

9241

VACCINATION IN THE PUNJAB

FOR THE YEAR 1915-16

BY

THE HON'BLE COLONEL H. HENDLEY, M.D., K.H.S., I.M.S.,

Offg. Sanitary Commissioner, Punjab.



L a h o r e :

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, PUNJAB.

1916. * * *

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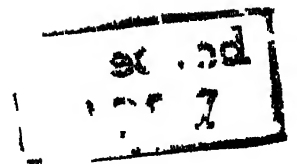
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PUNJAB FOR THE YEA 1915-16.

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Offg. Sanitary Commissioner, Punjab.



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(The text of these notes is limited to 4 pages.)

TABLE OF CONTENTS.

Para. or state- ments.	Subject.	Page.
2	Administration	1
3	Strength of vaccination establishment. Statement No. II ...	ib.
4	Cost of the department. Statement No. II ...	ib.
5	Cost per successful case. Statement No. II ...	ib.
6	Total operations done by all establishments. Statement No. I ...	ib.
7	House-to-house vaccination	ib.
8	District staff. Statement No. I.	2
9	Ratio of persons successfully vaccinated per 1,000 of population. State- ment No. I.	ib.
10	Special staff. Statement No. I and its appendix	ib.
11	Cantonment staff. Annual Form No. I and its appendix	ib.
12	Dispensary staff. Statement No. III	3
13	Inspection work. Statement No. V	ib.
14	Vaccination in large Native States	ib.
15	Vaccination work in municipal towns	ib.
16	Punjab Vaccine Institute	"
17	Training of vaccinators	ib.
ANNUALS FORMS.		
I	Statement showing particulars of vaccination in the Punjab Province during the year 1915-16.	ii
	Appendix to Statement No. I.—Showing the details of the vaccination operations performed by the special and Cantonment staffs accord- ing to localities during the year 1915-16.	iv
II	Statement showing the cost of the Department in the Punjab Province during the year 1915-16.	v
III	Statement showing Dispensary vaccinations in the Punjab Province during the year 1915-16.	vi
IV	Comparative Statement showing the number of persons primarily vacci- nated and the number of those persons who were successfully vaccinated in the Punjab in previous years.	vii
V	Statement showing total number of primary and re-vaccinations perform- ed and number inspected by Civil Surgeons and Superintendents of Vaccination or other inspecting officers, the percentages of those in- spected, together with the percentages of cases found successful by them, as contrasted with the percentages reported by the Vaccinators in each district of the Punjab during the year 1915-16.	viii
APPENDICES.		
A	Statement showing the number of vaccinations performed in municipal towns on children under one year of age during the year 1915-16.	ix
B	Statement showing the annual number of succes-ful vaccinations, and the annual ratio of deaths from small-pox per 1,000 of population in each district of the Punjab for five years ending 1915-16. Diagram showing the death rates from small-pox during the year 1915-16, the average rate of mortality from small-pox for the five years ending 1914-15, and the proportion of successful vaccinations during the year 1915-16, and the preceding six years in each district of the Punjab.	xiv

FROM

THE HON'BLE MR. O. F. LUMSDEN, I.C.S.,

Financial Secretary to Government, Punjab,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,
DEPARTMENT OF EDUCATION.

Dated Lahore 21st July 1916.

Home-
Sanitary.

SIR,

I AM directed to forward, for the information of the Government of India, a copy of the Sanitary Commissioner's Notes on Vaccination in the Punjab during the year 1915-16. The death-rate from small-pox in 1915 was lower than in any year since the introduction of the system of registration of deaths; in these circumstances the increase of over 20,000 in the number of re-vaccinations performed during the year under review reflects credit on the vaccination establishment. The number of primary vaccinations was also most satisfactory, for though the actual number of such operations was less by 2,025 than in the previous year, the proportion of the children available vaccinated was greater and amounted to over 99 per cent.

2. The percentage of successful re-vaccinations was 2·6 better than in the previous year, but there was a slight falling off in the ratio of success obtained in primary operations, which is attributed to the effect on some of the lymph supplied of the excessive heat in certain districts. There was a very considerable increase—from 8,489 to 15,049—in the number of vaccinations of infants under one year of age performed by the special staff. The disproportion between the number of males and number of females re-vaccinated continues to be pronounced, males accounting for nearly 69 per cent. of the total number of operations. It has, however, to be borne in mind that 55 per cent. of the population are males so that the disproportion is not so great as it would appear at first sight.

3. During the year under review the Vaccination Act was extended to four municipalities and has since been extended to five others. There are, however, still about 70 towns out of 100 in which the Act might be enforced, that have so far failed to adopt this simple measure for the protection of infants, and His Honour is disappointed to find that so poor a response has been made by municipalities to the appeal which was addressed to them last year. In the Hissar, Hoshiarpur and Montgomery Districts the Act is not in force at all, while in the Jullundur, Ludhiāna, Lahore, Amritsar, Gurdāspur, Siālkot, Gujranwāla and Dera Ghāzi Khan Districts it has been adopted in only one municipality each.

4. The total number of vaccinators employed in the province was 274, and of these 63 attended the classes held during the year at the Vaccine Institute, Lahore, for instruction in the technique of vaccination and principles of elementary hygiene.

I have the honour to be,

SIR,

Your most obedient Servant,

O. F. LUMSDEN,

Financial Secretary to Government, Punjab.

No. 3001.

FROM

THE HON'BLE COLONEL H. HENDLEY, M.D., K.H.S., I.M.S.,
Offg. Sanitary Commissioner, Punjab,

TO

THE HON'BLE MR. O. F. LUMSDEN, I.C.S.,
Financial Secretary to Government, Punjab.

Dated Lahore, the 1st July 1916.

SIR,

I HAVE the honour to forward, for the information of His Honour the Lieutenant-Governor of the Punjab, the Annual Vaccination Statements for the year 1915-16.

2. The charge of the Vaccination Department was held by Colonel C. J. Bamber, I M S., from the commencement of the year till the forenoon of the 12th July, when I relieved him and held additional charge for the remainder of the year. The appointment of Deputy Sanitary Commissioner, was held throughout the year by Major W. H. O. Forster, I.M.S., in addition to his duties as Professor of Pathology at the Lahore Medical College, and Dr. K. A. Rahman, M. B. Ch. B. (Edin.), D. P. H. (London) held the post of Additional Deputy Sanitary Commissioner. The appointment of Superintendent, Punjab Vaccine Institute, was held from the commencement of the year till May 17th by Assistant Surgeon Maharaj Krishna, Kapur, by Major Forster from May 18th to August 5th, from August 6th to February 29th by Assistant Surgeon Pars Ram, when he was relieved by Assistant Surgeon Prem Nath, Suri, who held the post till the end of the year.

Administration.

3. The strength of the Vaccination Establishment was 5 Divisional Inspectors, 30 Superintendents of Vaccination, the same as last year, and 27½ vaccinators or 4 more than in the previous year. The increase is due to the entertainment of one vaccinator for both the towns of Shahabad and Thanesar in the Karnal District, and one each in Simla and Jagraon municipalities and Jullundur Cantonment.

Strength of vaccination establishment — Statement No. II.

4. In 1915-16 the cost of the Department amounted to Rs. 1,40,964, a decrease of Rs. 5,983 compared with the figures for the previous year. This is due entirely to the decrease in the pay and travelling allowance of the Deputy Sanitary Commissioner, owing to the absence of the permanent incumbent on Military duty.

Cost of the department — Statement No. II.

5. The average cost of each successful vaccination was Re. 0-3-1 as compared with Re. 0-3-3 in the previous year. The decrease in the average cost of a successful case is also due to the reason stated in the preceding paragraph. If, however, the sum of Rs. 19,607, which has been credited to Government on account of the cost of vaccine sold, be deducted from the total expenditure, the average cost works out to Re. 0-2-8 for the year under report as compared with Re. 0-2-9 in the previous year.

Cost of each successful case. — Statement No. II.

6. The amount of work done in 1915-16 was satisfactory, the total number of operations performed by all establishments amounting to 855,048 or nearly two per cent. in excess of the figures for the previous year; of this number 663,236 were primary and 191,812 re-vaccinations as compared with 671,261 and 165,378, respectively, in the previous year. The slight decrease of 2,025 in primary vaccination is manifestly due to the diminution in the number of children available for the operation as compared with the previous year. In 1915-16 the number of such children was 671,556 as against 696,453 in 1914-15. The increase of 20,434 in re-vaccination is very satisfactory and reflects credit on the establishment.

Total operations done by all establishments — Statement No. I.

7. There was a total of 17,272 operations performed under the house-to-house system in 11 districts, viz., 433 in Muzaffargarh, 493 in Jhelum, 600 in Ferozepore, 910 in Lyallpur, 1,140 in Karnal, 1,769 in Shahpur, 1,793 in Montgomery, 1,832 in Jhang, 2,841 in Hissar and 8,400 in Lahore, including 7,200

House-to-house vaccination.

in the Lahore Municipality and the largest number 27,061 (2,087 in 5 towns and 24,974 in 1,150 villages) in the Gurdaspur District.

District Staff.—
Statement No. I.

8. The total number of operations performed by the district staff in 1915-16 was 796,572 as against 722,988 in the previous year, an increase of 13,584. Compared with the previous year there was a decrease of 8,251 primary operations and an increase of 21,335 re-vaccinations. In the case of primary operations 13 districts recorded an excess and 15 a decrease as compared with the figures for the previous year. The diminution is partly due to the fact that from all those districts which showed a reduction of more than one thousand except Montgomery vaccinators were sent for training to the Punjab Vaccine Institute at Lahore and they were replaced by vaccinators from the Special Staff, Punjab, whose work is shown separately, and partly to the decrease in the number of children. The decrease in the Montgomery District is not satisfactorily explained by the Civil Surgeon, but is probably due also to the diminution in the number of births in that district. The percentage of successful primary vaccination of children under one year of age to the total number available was 73.41, the same as in the previous year, and 72.98, the average for the previous five years. This satisfactory result is an indication of the good work of the district vaccination staff. The increase of 21,335 re-vaccinations compared with the figures for the previous year is very satisfactory. This increase was noticed in 19 districts, and was well marked (5,686) in Karnal, (4,526) in Ambala, (4,093) in Gujranwala, (3,053) in Rothak, (2,366) in Muzaffargarh, (2,297) in Amritsar and (2,008) in Hissar districts; in all others it varied between 1,491 in Ludhiana and 5 in Shahpur. The decrease in the 9 districts of Kangra, Rawalpindi, Jullundur, Multan, Attock, Sialkot, Gurdaspur, Dera Ghazi Khan and Simla is principally due to the difference in the population of the areas selected for re-vaccination. The percentage of males and females to total number of re-vaccinations was nearly the same as last year, *viz*, 68.77 in the case of males and 31.23 in that of females as against 68.55 and 31.45 in 1914-15. The percentage of success in primary vaccination was 96.45 as against 97.15 in the previous year, while in the case of re-vaccination it was 73.38 as compared with 70.78 in the previous year. The slight decrease in the percentage of success in primary cases is due to the fact that vaccine lymph supplied from the Murree Depot early in the season did not produce as good results as it should owing to the excessive heat in certain districts in the plains. The percentage of vaccinations in which results were not known to the total number in 1915-16 was 4.85 in the case of primary and 18.20 in that of re-vaccination as compared with 4.34 and 18.48, respectively, in the year preceding.

Ratio of persons
successfully vaccinated
per 1,000 of population—Statement
No. I
Special Staff.—Statement
No. I and its
appendix.

9 The number of persons successfully vaccinated by the district staff was 35.05 per mille of population as against 34.98 in the previous year.

10 The vaccinators of the Special Staff, Punjab, performed 28,733 primary operations and 18,270 re-vaccinations during the year as compared with 23,328 and 23,738 in the year preceding. This shows an increase of 5,405 or over 23 per cent. in the number of primary vaccinations and a diminution of 5,468 or 23 per cent. in re-vaccinations as compared with the figures for the year preceding. The percentage of success was 97.36 in the case of primary operations and 72.67 in that of re-vaccination as against 96.25 and 70.16, respectively, in 1914-15.

Cantonment staff.
Annual Form No. I
and its appendix.

11. The work done in cantonments which entertain their own vaccinators, amounted to 4,459 primary vaccinations and 4,443 re-vaccinations, an increase of 634 in the case of the former and of 3,125 in the latter over the corresponding figures for last year. The largest number of persons vaccinated was 3,680 in Ambala, 2,869 in Lahore, 890 in Rawalpindi and 813 in Ferozepore cantonments.

The percentage of success was 98.48 in primary and 70.38 in re-vaccination as against 99.08 and 70.04 in the previous year and the ratio per cent. of unknown cases to total cases in the case of primary was 2.69 and re-vaccination 9.88 as compared with 1.64 and 4.02 in 1914-15.

12. As compared with last year there was an increase of 137 primary and 942 re-vaccinations performed at dispensaries with a percentage of success of 99.73 in primary and 73.28 in re-vaccination as against 97.07 and 83.96 in 1914-15. The largest number of operations (1,173) was performed at dispensaries in the Ferozepore District.

Dispensary staff.—
Statement No. III.

13. During my inspection of Amritsar City and Gurdaspur I saw some children who were recently vaccinated and found that the operation had been properly carried out. The Deputy Sanitary Commissioner visited 88 towns and villages inspecting 799 primary and 679 re-vaccinations. The ratio of success in primary operations was 95.99 and in re-vaccinations 60.68 per cent. During his tours of inspection in Simla Hill States from June to September he approached some of the State authorities and tried to convince them of the necessity for bringing up children under 3 or 4 years of age for vaccination owing to their susceptibility to small-pox and of their danger to others, with some success. The Additional Deputy Sanitary Commissioner inspected 10,544 vaccinations in 25 towns and 543 villages of the Jhelum, Rohtak, Karnal, Shahpur, Attock, Sialkot, Hoshiarpur and Ambala districts, the results in most of the districts being very encouraging. Of the total number inspected 8,968 were primary and 1,676 re-vaccinations with a percentage of success of 91.28 in the case of the former and 73.57 in that of the latter. Civil Surgeons and Health Officers made 58,692 inspections of primary vaccination and 9,546 of re-vaccination, Divisional Inspectors 100,256 and 16,092 and Superintendents of Vaccination 450,390 and 112,511, respectively. The percentage of success verified by the Civil Surgeons and Health Officers was 92.74 in primary and 69.89 in re-vaccination, as compared with 92.99 and 58.59 and 95.00 and 71.71 found by Divisional Inspectors and Superintendents, respectively. The rates of success reported by vaccinators were 96.45 in primary and 73.38 in re-vaccination as against 97.13 and 70.68 in the year preceding.

Inspection work.—
Statement No. V.

14. The number of primary vaccinations and re-vaccinations performed in 1915-16 in the Native States which entertain their own vaccinators was as follows:—Patiala 50,035 and 28,688, Bahawalpur 14,127 and 120, Kapurthala 4,466 and 62, Faridkot 5,503 and 132, in Jind 10,221, and in Nabha 283 primary vaccinations. There was an increase in the total number of persons vaccinated in Patiala, Kapurthala and Faridkot and a slight decrease in other States as compared with the work for the previous year. The percentage of successful primary vaccination was 93.45 in Patiala, 96.67 in Bahawalpur, 99.57 in Kapurthala, 99.16 in Faridkot, 95.83 in Jind and 97.38 in Nabha. In the case of re-vaccination the percentage of success varied between 33.00 in Faridkot and 75.47 in Bahawalpur. In Patiala where the largest number of re-vaccinations were performed the rate was 77.15 per cent.

Vaccination in large
Native States.

15. Eighty-four per cent. of the total number of children under one year of age available for operation in 1915-16 were successfully vaccinated in the towns in which the Vaccination Act is in force as against 66 per cent. in those towns in which it was not in force, the corresponding rates for the previous year being 79 and 67 per cent. In the three largest towns of the province the percentage of successfully vaccinated children was 92 in Lahore, 86 in Amritsar and 79 in Multan as compared with 89, 76 and 86, respectively, in 1914-15. Of the 93 persons in Rawalpindi who were prosecuted for not submitting their children for vaccination, 29 were punished and Rs. 63-9-0 realized as fines.

Vaccination in muni-
cipal towns.

In 1915-16 the Vaccination Act, XIII of 1890, was extended to the municipal towns of Palwal in the Gurgaon, Sargodha and Miani in the Shahpur and Shujabad in the Multan districts. In Sialkot town vaccination operations were performed during the year under the provisions of the Vaccination Act and the question of the extension of the Act to the municipalities of Gojra, Sahiwal, Bhakkar, Dinga and Kunjah was under the consideration of Government at the close of the year under report.

Punjab Vaccine
Institute

16. The Institute supplied vaccine lymph to all the districts in the Province, to Native States in the Punjab, to the North-West Frontier Province, Jammu and Kashmir States, and Military Medical Officers, etc. The total number of tubes issued was 33,894 as compared with 31,726 in the previous year as detailed below—

	1914-15.	1915-16.
Civil Surgeons	20,187	21,364
Military Medical Officers	627	895
Native States	2,559	2,634
North-West Frontier Province	3,403	3,193
Special Staff	1,012	637
Out of Punjab	3,938	5,171
Total	31,726	33,894

In addition to this the Vaccine Institute supplied 5,100 capillary, 20 half gramme and 780 gramme tubes to the Military authorities for use out of India.

Out of the 33,894 tubes issued during 1915-16 results were received in the case of 30,821 tubes, showing that 961,397 primary and 210,585 re-vaccinations were performed with an insertion success of 96.06 per cent. in primary and 68.97 per cent. in re-vaccination as against 96.10 and 63.44, respectively, in the previous year.

Complaints were received from the Karnal District regarding the inferior quality of the lymph supplied by the Vaccine Institute, Punjab, but a comparison of the results obtained with the same lymph in other districts showed that it was capable of giving excellent results if properly used. The Additional Deputy Sanitary Commissioner was deputed to investigate, he came to the conclusion that these results were due partly to the deterioration of the vaccine at the commencement of the season on account of excessive heat and partly to want of technique and care of lymph on the part of vaccinators. This, it is hoped, will be obviated in the future when all vaccinators have undergone a course of training at the Institute and if vaccination operations are not commenced earlier than the 1st November.

Training of vaccinators

17. In accordance with the scheme for the training of vaccinators in the Punjab, in the technique of vaccination and the principles of elementary hygiene which was sanctioned by Government, nine classes were held during the year commencing from 1st November. Each course of instruction which lasted a fortnight was held at the Vaccine Institute, Lahore. The following detail shows the number of vaccinators trained from districts and the Delhi Province :—

(1) Lahore	(2) Amritsar,	(3) Gurdaspur,	
(4) Jullundur,	(5) Ferozepore,	(6) Mo-hiampur,	
(7) Kangra	Five vaccinators from each		= 35
(8) Ludhiana,	(9) Sialkot,	(10) Gujranwala,	
(11) Karnal,	(12) Gurgaon	(13) Ambala,	
(14) Hissar.	Four vaccinators from each	...	= 28
(15) Delhi Province	...	...	6
Total	...	...	69

Vaccinators from the Special Staff were deputed to work in place of men from the district staff undergoing training

I have the honour to be,

SIR,

Your most obedient servant,

H. HENDLEY, COLONEL, I. M. S.,

Offg. Sanitary Commissioner, Punjab.

A.—VACCINE DEPARTMENT.

**STATEMENT No I—SHOWING PARTICULARS OF VACCINATION IN THE
PUNJAB PROVINCE DURING THE YEAR 1915-16.**

A.—VACCINE

STATEMENT No. I.—SHOWING PARTICULARS OF VACCINATION

Serial No.	Districts.	Population of districts according to Census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	TOTAL NUMBER OF PERSONS VACCINATED.			Average number of persons vaccinated by each vaccinator.	PRIMARY VACCINATION.			
					Males.	Females.	Total.		Total.	Successful.		
										Under one year.	One year and under six years.	Total of all ages.
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Hissar ...	804,889	154	12	17,387	15,109	32,496	2,705'00	29,756	21,768	4,148	25,982
2	Rohtak ...	714,834	818	9	20,287	16,026	36,263	4,029'22	30,268	21,754	3,816	25,098
3	Gurgaon ...	729,167	322	10	16,858	13,309	29,667	2,966'70	25,008	15,357	4,352	19,758
4	Karnal ...	799,787	254	12	21,111	13,295	37,406	3,117'17	29,489	23,117	4,568	27,981
5	Ambala ...	632,553	342	12	16,350	11,924	23,274	2,356'17	19,685	14,296	3,060	17,444
6	Simla ...	34,970	346	2	422	230	652	326'00	497	310	57	461
7	Kangra ...	766,686	77	7	16,122	16,247	32,869	4,624'14	22,518	14,221	4,591	19,282
8	Hoshiarpur ...	918,569	409	11	18,822	14,187	33,009	3,000'82	25,237	17,696	6,107	23,906
9	Jullundur ...	787,956	551	10	16,632	12,876	29,508	2,950'80	23,326	17,758	1,424	19,198
10	Ludhiana ...	517,192	358	9	13,315	9,820	23,635	2,818'11	16,753	12,574	1,754	14,357
11	Ferozepore ...	933,499	218	10	16,672	14,656	31,328	3,132'30	30,977	24,434	2,593	29,762
12	Lahore ...	1,017,742	360	11	20,338	17,881	38,219	3,474'45	36,509	31,740	1,928	33,780
13	Amritsar ...	879,811	549	12	22,986	17,127	40,113	3,342'75	30,580	24,302	5,114	29,209
14	Gurdaspur ...	832,561	441	10	22,274	16,233	38,557	3,555'70	28,789	22,946	4,444	27,766
15	Sialkot ...	963,279	484	12	15,900	14,759	30,689	2,557'42	30,708	26,472	1,981	28,482
16	Gujranwala ...	923,419	226	11	24,296	13,325	42,621	3,874'64	31,438	24,258	4,144	28,704
17	Gujrat ...	745,634	364	10	14,050	11,742	25,792	2,579'20	23,824	19,772	2,133	21,922
18	Shahpur ...	687,866	185	8	11,258	10,123	21,381	2,672'63	20,568	14,344	5,017	19,447
19	Jhelum ...	504,195	179	6	9,051	6,663	15,714	2,612'00	12,932	11,264	854	12,236
20	Rawalpindi ...	547,483	253	7	9,667	7,960	17,627	2,518'14	14,748	12,732	1,536	14,332
21	Attock ...	515,286	128	7	11,802	8,572	20,374	2,910'57	16,252	12,891	2,170	15,082
22	Mianwali ...	341,377	63	6	11,028	9,212	20,235	3,372'50	12,957	10,761	1,532	12,449
23	Montgomery ...	504,115	113	6	8,203	6,296	14,499	2,416'50	12,868	11,236	1,069	12,514
24	Lyallpur ...	838,895	266	9	13,367	16,175	34,542	3,838'00	32,209	27,857	3,142	31,094
25	Jhang ...	515,526	158	8	14,192	12,447	26,639	3,329'88	20,105	14,090	4,505	18,871
26	Multan ...	814,871	131	12	22,609	17,206	39,815	3,317'92	24,684	23,378	2,971	23,886
27	Muzaffargarh ...	569,461	94	7	17,528	13,119	30,647	4,381'29	17,514	14,178	2,171	16,713
28	Dera Ghazi Khan ...	499,860	94	6	11,164	8,465	19,629	3,271'50	14,353	10,784	2,286	13,271
Total of district staff ...		19,890,483	200	252	438,636	353,064	791,700	3,141'67	634,527	492,990	86,162	582,332
Total of special staff ...		...	...	14	27,618	19,380	46,998	3,357'00	28,733	15,049	8,628	26,302
Total of cantonment staff ...		175,949	...	8	6,741	2,161	8,902	1,112'75	4,459	2,902	1,245	4,273
GRAND TOTAL ...		19,566,432	200	274	472,995	374,605	847,600	3,098'43	(a) 667,719	510,941	96,035	(b) 612,007

NOTE.—(a) Difference between number of operations and number of persons
(b) These figures include 5,931 primary successful vaccinations of

SUM

		TOTAL NUMBER OF PERSONS VACCINATED.		TOTAL NUMBER OF OPERATIONS PERFORMED.		PERCENTAGE OF SUCCESSFUL CASES IN WHICH RESULTS WERE KNOWN.	
		Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
By district, cantonment and special staff (Statement No. I)	...	662,842	184,758	667,719	184,758	96'50	73'22
By dispensary staff (Statement No. II)	...	1,517	1,054	1,517	1,054	99'73	73'23
By other agencies, if any	...	...	...	...	...	...	...
		664,359	185,812	669,236	185,812	96'51	73'22

DEPARTMENT.

IN THE PUNJAB PROVINCE DURING THE YEAR 1916-17.

RE-VACCINATION.				PERCENTAGE OF SUCCESSFUL CASES IN WHICH THE RESULTS WERE KNOWN.		Persons successfully vaccinated per 1,000 of population.	PERCENTAGE OF UNKNOWN CASES TO TOTAL CASES.		AVERAGE ANNUAL NUMBER OF PERSONS SUCCESSFULLY VACCINATED DURING PREVIOUS FIVE YEARS.		AVERAGE ANNUAL NUMBER OF DEATHS FROM SMALL-POX DURING PREVIOUS FIVE YEARS.		Serial No.
Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000.	Number.	Ratio per 1,000.	
14	15	16	17	18	19	20	21	22	23	24	25	26	27
1,240	3,082	1,000	431	90.94	38.45	38.48	4.17	14.22	27,785	34.52	708	0.88	1
8,722	6,321	2,348	3,044	94.55	71.50	38.39	13.80	48.18	26,170	35.21	84	0.12	2
3,047	4,635	2,454	1,282	89.99	72.11	30.46	12.19	27.36	23,801	32.64	831	0.45	3
818	9,075	6,028	1,747	97.59	82.26	42.46	2.73	19.25	27,818	34.78	219	0.27	4
1,077	8,539	5,886	1,613	93.74	77.21	36.09	5.47	18.78	20,076	31.74	453	0.72	5
81	159	35	51	98.93	32.41	14.18	6.24	32.08	646	18.47	7	0.20	6
2,987	9,551	5,679	2,391	98.22	76.13	32.56	12.82	24.27	29,478	38.45	43	0.06	7
749	7,591	4,468	1,421	97.62	69.06	30.89	2.97	18.01	29,082	31.66	508	0.55	8
3,545	6,439	3,363	1,277	97.03	65.15	23.68	15.20	19.83	22,807	23.94	686	0.87	9
878	7,884	3,822	1,547	90.41	65.43	35.15	5.21	20.95	17,017	32.90	493	0.95	10
822	351	183	79	98.68	67.28	32.08	2.59	22.51	30,142	32.29	1,680	1.80	11
1,260	1,710	1,232	276	95.69	85.91	34.35	3.45	16.14	36,811	36.17	1,534	1.51	12
449	9,533	4,957	1,581	97.07	62.34	38.86	1.60	16.58	35,205	40.04	648	0.74	13
593	9,818	6,480	1,828	98.67	81.05	41.13	2.08	18.58	31,945	38.35	275	0.33	14
1,694	811	133	89	98.17	59.91	29.71	5.52	28.62	33,117	34.38	774	0.80	15
1,522	11,329	7,747	1,656	95.79	80.09	39.47	4.83	14.62	37,208	40.29	414	0.45	16
1,296	2,153	1,208	482	97.31	72.29	31.02	5.44	22.39	24,904	33.40	822	1.10	17
722	818	411	171	97.99	64.02	23.89	3.51	21.03	20,871	30.86	878	1.28	18
380	2,752	1,571	580	97.25	72.33	27.38	2.98	21.08	15,308	30.86	533	1.06	19
300	2,879	2,193	254	99.20	83.54	32.55	2.03	8.32	20,228	36.93	400	0.79	20
309	4,239	2,932	333	94.96	75.06	34.96	2.27	7.83	17,428	33.83	696	1.85	21
312	7,289	5,869	513	93.45	88.61	53.68	2.41	7.02	17,626	51.63	164	0.43	22
266	1,031	395	167	99.30	24.98	25.61	2.07	10.24	14,897	29.15	831	1.65	23
449	2,333	1,575	352	97.77	79.51	36.75	1.27	15.09	31,660	35.62	1,169	1.30	24
383	7,283	5,329	979	95.70	84.74	46.94	1.92	13.47	23,465	45.52	437	0.85	25
743	15,309	6,754	2,986	97.70	54.81	38.99	3.03	19.50	37,113	45.54	273	0.34	26
463	13,625	10,990	1,116	98.01	87.86	43.65	2.64	8.19	28,932	50.81	268	0.47	27
746	5,276	2,727	1,253	97.53	67.79	32.00	5.20	23.75	26,091	52.20	534	1.07	28
30,750	162,045	97,264	29,493	96.45	73.38	35.05	4.85	18.20	706,406	36.43	15,852	0.82	
1,718	18,270	11,794	2,041	97.36	72.67	...	5.98	11.17	34,587	...	...	...
120	4,443	2,816	439	98.43	70.33	40.29	2.69	9.88	6,223	35.36	10	0.06	
32,588	184,758	111,874	31,978	96.50	73.22	37.04	4.83	17.31	747,215	33.19	15,862	0.81	

vaccinated equals 4,877 which represents secondary operations, persons of six years and over six years of age.

MARY.

AVERAGE NUMBER OF PERSONS VACCINATED BY EACH VACCINATOR.		NUMBER OF CHILDREN SUCCESSFULLY VACCINATED.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Department.	Average cost of each successful case.	REMARKS
Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year	One and under six years.				
274	3,093.43	510,941	91,085	37.04	Rs. A P. 1,40,964 2 5	Rs. A P. 0 3 1	
...	...	1,157	27	...	...	...
...	
274	3,093.43	512,098	96,062	37.16	Rs. A P. 1,40,964 2 5	Rs. A P. 0 3 1	

APPENDIX TO STATEMENT No I.

STATEMENT SHOWING THE DETAILS OF THE VACCINATION OPERATIONS PERFORMED BY THE SPECIAL AND CANTONMENT STAFFS ACCORDING TO LOCALITIES, DURING THE YEAR 1915-16.

1	2	3	4	5	6					7			8		9		10	
No.	District.	Name of localities.	Average number of Vaccinators employed throughout the year.	Total number of persons vaccinated.	PRIMARY VACCINATION.					RE-VACCINATION.			PERCENTAGE OF SUCCESSFUL CASES IN WHICH THE RESULTS WERE KNOWN.		PERCENTAGE OF UNKNOWN CASES TO TOTAL CASES.		No.	
					Total.	Successful.				Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.	Primary.		Re-vaccination.
						Under one year.	One year and under six years.	Six years and over six years.	Total of all ages.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
THE VACCINATIONS PERFORMED BY SPECIAL STAFF ARE INCLUDED IN STATEMENT No. I.																		
1	Simla ..	Boghal (Arki) State	...	720	289	84	175	75	284	8	431	216	25	...	...	...	...	1
2		Mullog State	...	739	250	143	73	20	236	6	459	228	53	...	...	...	...	2
3		Bija	...	62	25	12	5	3	20	2	87	24	2	...	...	...	...	3
4		Kuthar	...	538	240	78	105	33	216	9	292	180	21	...	...	...	...	4
5		Bilaspur	...	4,327	2,549	1,188	980	131	2,349	152	1,778	922	288	...	...	...	...	5
6		Bahrauli Tahsil	...	684	205	49	130	17	196	5	759	611	29	...	...	...	...	6
7		Ghund State	...	103	43	...	1	34	45	3	55	19	1	...	...	...	...	7
8		Keonthal	...	1,029	426	8	200	174	382	20	608	433	48	...	...	...	...	8
9		Theog	...	303	167	...	30	120	162	2	136	55	9	...	...	...	...	9
10		Madhan	...	283	141	...	57	75	132	7	92	47	16	...	...	...	...	10
11		Balsan	...	155	112	...	9	97	106	6	43	20	2	...	...	...	...	11
12		Kot Khai Tahsil	...	478	232	2	153	55	210	20	246	157	23	...	...	...	...	12
13		Kaneti State	...	110	71	...	23	45	68	2	89	20	7	...	...	...	...	13
14		Jubbal	...	2,203	1,295	28	842	384	1,254	33	903	563	70	...	...	...	...	14
15		Kumharsain State	...	82	53	...	37	11	48	4	29	15	...	...	...	...	...	15
16		Taroch State	...	573	244	1	182	57	240	4	309	156	35	...	...	...	...	16
17		Dhadi	...	9	6	...	3	3	6	...	3	8	...	...	...	...	...	17
18		Dhami	...	411	197	27	158	11	196	...	214	150	20	...	...	...	...	18
19		Rampur Bashaht State.	...	584	440	109	177	20	312	113	124	69	23	...	...	...	...	19
20	Kangra	Baghat (Solon) State	...	471	203	95	98	5	198	6	265	128	26	...	...	...	...	20
21		Vandi State	...	3,350	2,169	439	1,137	522	3,098	41	1,181	709	157	...	...	...	...	21
22		Kangra District	...	1,119	722	336	295	...	671	33	287	182	25	...	...	...	...	22
23		Ambala	...	422	432	378	32	...	410	16	...	...	...	...	...	...	...	23
24		Kalsia State	...	1,045	1,577	932	437	20	1,463	88	68	42	72	...	...	...	...	24
25	Ambala	Sirmur (Nahan) State.	...	9,575	2,997	935	1,473	415	2,823	148	6,578	4,020	544	...	...	...	...	25
26		Murree Tahsil	...	157	156	134	17	1	152	2	1	...	...	...	...	...	...	26
27		Murree Town	...	55	24	24	10	...	84	...	1	1	...	...	...	...	...	27
28		Murree Cantonment	...	174	27	11	8	6	25	2	147	85	21	...	...	...	...	28
29		Kuldana	...	58	8	7	1	...	8	...	50	28	2	...	...	...	...	29
30	Rawalpindi.	Lower Topa	...	11	1	...	1	...	1	...	10	10	...	...	...	...	...	30
31		Upper	...	31	3	...	3	...	3	...	23	21	...	...	...	...	...	31
32		Gharia	...	6	6	3	2	1	6	...	...	...	...	...	...	...	...	32
33		Lahore Female Jail	...	140	67	7	12	48	67	...	73	51	2	...	...	...	...	33
34		Lahore Central	...	533	159	2	5	146	153	6	424	242	61	...	...	...	...	34
35	Lahore ..	Lahore Borsal	...	341	77	6	14	54	74	2	204	199	24	...	...	...	...	35
36		Lahore District	...	1,809	1,899	1,589	128	...	1,717	77	...	...	...	...	...	...	...	36
37		Amritsar	...	2,124	1,105	814	205	2	1,321	24	1,019	557	163	...	...	...	...	37
38		Ferozepore	...	2,162	2,147	1,559	211	1	1,801	321	15	10	2	...	...	...	...	38
39		Gurdaspur	...	1,484	1,461	1,185	260	3	1,428	16	23	18	5	...	...	...	...	39
40	Jullundur...	Jullundur	...	1,899	1,008	665	149	...	814	152	861	108	165	...	...	...	...	40
41		Hoshiarpur	...	1,027	704	538	110	...	648	43	823	188	48	...	...	...	...	41
42		Gujranwala	...	588	533	418	58	1	477	55	5	5	...	...	...	...	...	42
43		Sialkot	...	403	403	328	71	...	397	6	...	...	...	...	...	...	...	43
44		Ludhiana	...	1,084	1,343	906	194	15	1,115	190	324	221	60	...	...	...	...	44
45	Karnal ..	Karnal	...	1,053	1,049	870	144	2	1,016	21	4	2	2	...	...	...	...	45
46		Gurgaon	...	1,278	1,067	768	176	2	946	69	211	146	15	...	...	...	...	46
47		Hissar	...	878	878	313	54	1	368	6	...	...	...	...	...	...	...	47
Total				14	46,698	28,738	15,049	8,028	2,625	26,302	1,718	18,270	11,794	2,041	97.36	72.67	5.98	11.17

NOTE.—(a) Difference between number of operations and number of persons vaccinated equals 5 which represents secondary operations.

THE VACCINATIONS PERFORMED IN CANTONMENTS BY DISTRICT STAFF ARE INCLUDED IN STATEMENT No. I.

Multan	Multan	...	107	104	89	39	3	81	23	3	...	2	...	...	...	...	...
Total		...	107	104	89	39	3	81	23	3	...	2	100.00	...	22.12	66.67	...

THE VACCINATION IN CANTONMENTS WHICH ENTERTAIN THEIR OWN VACCINATORS ARE SHOWN SEPARATELY IN STATEMENT No. I.

1	Ambala	Ambala	...	1	3,680	1,924	1,150	589	8	1,697	82	1,856	998	256	...	...	...	1
2	Jullundur	Jullundur	...	1	163	128	108	22	...	125	2	41	38	1	...	...	...	2
3	Ferozepore	Ferozepore	...	1	813	654	508	116	19	843	8	159	89	12	...	...	...	3
4	Lahore	Lahore	...	1	2,369	627	276	267	85	618	9	1,742	1,210	85	...	...	...	4
5	Sialkot	Sialkot	...	1	376	320	289	58	...	822	4	50	50	...	...	...	...	5
6	Rawalpindi	Rawalpindi	...	2	890	706	545	181	4	630	13	184	108	59	...	...	...	6
7	Ambala	Kasauli	...	...	180	87	41	46	...	87	...	43	38	1	...	...	...	7
8	Simla	Sabathu	...	1	116	46	19	22	2	43	...	70	45	13	...	...	...	8
9		Dargahai	...	...	256	80	10	20	4	34	1	220	184	10	...	...	...	9

STATEMENT No. II—SHOWING THE COST OF THE DEPARTMENT IN THE PUNJAB PROVINCE DURING THE YEAR 1915-16.

Average cost is calculated on the total number of successful vaccinations and re-vaccinations performed by the district, special and cantonment staff, *vide* statement No. 1.

	{ (a) Deputy Sanitary Commissioner.
†	{ (b) Superintendent, Punjab Vaccine Institute Indian,
	including two Laboratory attendants.

As a former agent is authorized on the total number of assignments transferred by the district official and contentment staff, vide statement No. 1,

B.—DISPENSARY VACCINATION.

STATEMENT No. III — SHOWING DISPENSARY VACCINATIONS IN THE PUNJAB PROVINCE DURING THE YEAR 1915-16.

Districts.	2	3	4	5	6	7										8				9		10		11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
						PRIMARY VACCINATION.					RE-VACCINATION.					PERCENTAGE OF SUCCESSFUL CASES IN WHICH THE RESULTS WERE KNOWN.				PERCENTAGE OF UNKNOWN CASES TO TOTAL CASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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						Males.	Females.	Under one year.	One year and under 15 years.	Five years and over 15 years.	Total of all ages.	Unknown.	Males.	Females.	Total.	Successful.	Unknown.	Males.	Females.	Primary.	Re-vaccination.	Primary.	Re-vaccination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
						Average number of persons vaccinated by each vaccinator	Total number of persons vaccinated.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

NOTE.—There were no special vaccinators attached to the dispensaries. Vaccinations were performed by Civil Surgeons, Assistant Surgeons, Sub-Assistant Surgeons and compounders.

COMPARATIVE STATEMENT No. IV.—SHOWING THE NUMBER OF PERSONS PRIMARILY VACCINATED AND THE NUMBER OF THOSE PERSONS WHO WERE SUCCESSFULLY VACCINATED IN THE PUNJAB IN EACH OF THE UNDERMENTIONED OFFICIAL YEARS.

	PERSONS PRIMARILY VACCINATED.													
	Average total number.		Average number successfully vaccinated.		Total number.		Number successfully vaccinated.		Total number.		Number successfully vaccinated.		Total number.	
	1867 to 1905.	1906.	1908.	1907.	1904.	1903.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	
Government	182,077	855,221	386,254	1,757	2,257	19,443	15,074	1,489	1,517	688,986	28,738	614,378	608,230	614,378
Principal
1 (District and Cantonnments) Funds
Provinces
Army.
Total

Notes.—The figures from 1867 to 1902 are taken from Annual Vaccination Reports of the Province as constituted during that period.

STATEMENT NO. V.—SHOWING TOTAL NUMBER OF PRIMARY AND RE-VACCINATIONS PERFORMED AND NUMBER INSPECTED BY CIVIL SURGEONS AND SUPERINTENDENTS OF VACCINATION OR OTHER INSPECTING OFFICERS, THE PERCENTAGES OF THOSE INSPECTED, TOGETHER WITH THE PERCENTAGES OF CASES FOUND SUCCESSFUL BY THEM, AS CONTRASTED WITH PERCENTAGES REPORTED BY THE VACCINATORS IN EACH DISTRICT OF THE PUNJAB DURING THE YEAR 1915-16.

No.	Districts.	TOTAL NUMBER OF PERSONS VACCINATED.		TOTAL NUMBER INSPECTED				PERCENTAGE OF INSPECTIONS TO TOTAL NUMBER VACCINATED						PERCENTAGE OF CASES FOUND SUCCESSFUL TO TOTAL NUMBER INSPECTED.				PERCENTAGE OF SUCCESS REPORTED BY VACCINATORS.		
		Primary.	Re-vaccination.	By Civil Surgeons*.	By Superintendents of Vaccination.	By Districtal Inspectors.	Primary.	Re-vaccination.	By Civil Surgeons*.	By Superintendents of Vaccination.	By Districtal Inspectors.	Primary.	Re-vaccination.	By Civil Surgeons*.	By Superintendents of Vaccination.	By Districtal Inspectors.	Primary.	Re-vaccination.	Percentage of Success.	
1	Hissar	29,464	3,032	1,180	22,541	2,074	2,216	8,999	2,216	4,000	6,777	76,500	68,400	7,522	80,050	92,222	38,114	91,833	90,844	38.45
2	Rohtak	29,942	6,321	4,730	23,476	3,297	8,999	3,297	8,999	15,800	19,590	82,387	78,400	8,005	90,050	97,477	67,911	90,365	94,555	71.50
3	Gurgaon	24,982	4,085	3,186	21,511	552	2,087	6,249	2,087	12,750	19,590	82,387	78,400	8,005	90,050	82,977	88,777	86,112	89,599	82.26
4	Karnal	28,331	9,075	952	26,215	6,249	4,629	4,629	4,629	3,360	8,999	82,387	78,400	8,005	90,050	97,944	89,065	94,866	93,744	77.21
5	Amala	21,596	10,488	407	10,366	4,569	3,812	3,812	3,812	1,880	8,999	82,387	78,400	8,005	90,050	90,773	64,569	93,700	98,937	32.41
6	Simla	6,000	527	81	4,415	109	938	938	938	5,170	7,522	73,500	20,633	17,461	31,000	98,935	33,111	100,000	98,937	98.93
7	Kangra	22,578	9,851	2,996	10,494	3,861	6,938	6,938	6,938	1,715	2,740	46,800	39,100	31,000	46,800	74,532	46,778	73,558	98,937	78.13
8	Hoshiarpur	25,118	7,891	3,553	15,881	3,549	5,332	5,332	5,332	12,915	6,870	82,387	44,998	21,233	19,922	97,044	73,123	98,001	97,622	69.06
9	Jullundur	23,197	6,480	190	12,637	1,358	10,885	10,885	10,885	0,332	19,590	82,387	20,866	48,932	48,932	95,857	65,688	98,663	97,030	65.15
10	Ludhiana	16,251	7,884	5,086	14,223	5,796	4,107	4,107	4,107	81,900	19,775	76,522	78,400	25,277	13,911	88,911	75,222	78,886	90,411	65.48
11	Ferozepore	32,697	617	2,439	24,725	2,000	3,220	3,220	3,220	7,150	19,590	82,387	78,400	8,005	90,050	97,944	80,000	95,300	98,682	67.28
12	Lahore	37,149	3,965	2,087	33,785	2,972	11,846	11,846	11,846	5,610	8,999	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
13	Amritsar	30,550	9,538	9,557	19,963	6,251	4,898	4,898	4,898	10,118	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
14	Gurdaspur	29,165	10,252	2,951	24,193	6,287	8,133	8,133	8,133	14,240	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
15	Sheikol	30,704	361	4,884	25,559	138	3,614	3,614	3,614	1,420	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
16	Gujranwala	31,292	11,329	500	24,809	6,260	2,158	2,158	2,158	1,900	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
17	Gujrat	23,529	2,153	3,355	14,111	251	2,088	2,088	2,088	9,730	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
18	Shahpur	20,568	813	1,568	11,011	251	2,088	2,088	2,088	9,730	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
19	Jhelum	12,982	2,752	1,261	9,800	1,407	1,450	1,450	1,450	9,730	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
20	Rawalpindi	16,454	3,063	1,261	10,444	2,355	767	767	767	218	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
21	Attock	16,135	4,239	...	11,617	3,015	816	816	816	622	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
22	Mianwali	12,946	7,289	2,344	5,728	3,100	497	497	497	314	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
23	Montgomery	12,866	1,631	681	9,751	1,240	1,204	1,204	1,204	4,900	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
24	Lyallpur	32,209	2,338	1,867	21,574	1,339	2,983	2,983	2,983	5,800	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
25	Jhang	19,571	7,268	1,552	12,144	5,564	2,611	2,611	2,611	8,010	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
26	Multan	24,506	15,309	918	22,723	14,654	5,845	5,845	5,845	1,527	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
27	Muzaffargarh	17,044	13,625	1,520	10,492	11,295	835	835	835	1,932	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
28	Dera Ghazi Khan	14,353	5,276	707	10,664	8,781	1,371	1,371	1,371	1,694	19,590	82,387	78,400	8,005	90,050	97,032	81,388	97,032	97,032	95.69
29	Special staff	28,738	18,270	4,793	9,988	8,987	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	Additional Deputy Sanitary Commissioner, Punjab.	...	...	8,808	1,676	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31	Total	664,359	185,812	68,359	450,390	112,511	100,256	16,092	10,299	6,400	67,790	60,550	15,090	8,660	92,550	99,500	71,711	92,999	98,450	73.38

APPENDIX A.

STATEMENT SHOWING THE NUMBER OF VACCINATIONS PERFORMED IN MUNICIPAL TOWNS ON CHILDREN UNDER ONE YEAR OF AGE DURING THE YEAR 1915-16.

Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1916.	Date of extension of Vaccination Act to town.
1	2	3	4	5
HISSAR DISTRICT.				
Hissar	824	275	489	Act is not in force.
Hansi	743	262	497	
Bhiwani	1,489	483	751	
Sirsa	637	213	484	
Fatthabad	48	11	42	
ROHTAK DISTRICT.				
Rohtak	1,064	235	517	22nd July 1890.
Jhajjar	606	125	251	24th February 1909.
Beri	419	81	180	31st July 1893.
Gohana	269	76	134	24th February 1909.
Bahadurgarh	280	48	150	
Sonepat	643	140	292	24th January 1901.
GURGAON DISTRICT.				
Bewari	940	196	531	28th February 1905.
Palwal	586	140	277	15th June 1915.
Firozpur	267	57	129	Act is not in force.
Hodal	366	64	114	
Ballabgarh	169	40	39	
Faizabad	209	48	70	
KARNAL DISTRICT.				
Karnal	991	234	671	23rd March 1914.
Kaithal	684	174	378	16th December 1909.
Panipat	1,320	290	799	Act is not in force.
Shahabad	485	100	206	
Thanesar	147	34	61	
AMBALA DISTRICT.				
Ambala	1,037	189	560	1st October 1895.
Jagadhri	434	150	296	7th February 1910.
Burya	153	51	81	Act is not in force.
Sadhaura	250	52	145	
Rupar	256	75	157	January 1901.

*Including inspection work of Health Officers of Simla, Lahore and Amritsar.
†Inspected by Deputy Sanitary Commissioner.

APPENDIX A—CONTINUED.

Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1916.	Date of extension of Vaccination Act to town.
1	2	3	4	5
SIMLA DISTRICT				
Simla	366	114	310	7th August 1889.
KANGRA DISTRICT.				
Kangra	103	32	55	Act is not in force.
Dharmasala	66	16	86	11th November 1898
HOSHIARPUR DISTRICT.				
Hoshiarpur	715	170	263	} Act is not in force.
Khanpur	118	16	24	
Hariana	202	26	55	
Garhdiwala	123	23	41	
Dasuya	263	33	81	
Tanda-Urmar	319	59	155	
Miani	202	31	89	
Mukerian	130	10	30	
Una	165	18	51	
Anandpur	108	22	67	
JULLUNDUR DISTRICT.				
Jullundur	1,944	426	1,401	9th July 1894.
Kar arpur	354	8	172	} Act is not in force.
Burgab	191	24	71	
Rahon	244	23	105	
Phillaur	163	27	78	
Nurmahal	283	84	108	
Nakodar	342	81	121	
LUDHIANA DISTRICT				
Ludhiana	1,330	300	1,369	25th February 1907.
Jagraon	783	171	353	} Act is not in force.
Rashtkot	314	60	201	
Khanna	148	30	51	
FEROZEPUR DISTRICT.				
Ferozepore	804	160	362	} 1st November 1911.
Zira	193	33	110	
Dharmkot	212	50	141	
Muktsar	442	120	171	
Fazilka	124	124	238	

APPENDIX A—CONTINUED.

Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1916.	Date of extension of Vaccination Act to town.
1	2	3	4	5
LAHORE DISTRICT.				
Lahore	8,028	1,927	5,631	10th August 1894.
Chunian	361	65	187	} Act is not in force.
Khudian	141	28	69	
Kasur	1,184	247	654	
Khem Karn	289	69	60	
Patti	370	70	145	
AMRITSAR DISTRICT.				
Amritsar	6,678	1,325	4,590	29th March 1887.
Majitha	265	63	145	} Act is not in force.
Jandia's	284	68	227	
Tarn Taran	199	43	127	
GURDASPUR DISTRICT.				
Gurdaspur	224	42	167	} Act is not in force.
Dinanagar	166	33	127	
Pathankot	325	53	201	
Dalhousie	22	8	277	November 1904.
Batala	1,594	326	1,070	} Act is not in force.
Dera Nanak	215	45	165	
SIALKOT DISTRICT.				
Sialkot	2,323	320	1,248	16th June 1914.
Daska	253	41	171	} Act is not in force.
Jamke	175	24	119	
Pasrur	239	24	126	
Zaffarwal	147	32	52	
Narowal	252	40	118	
Sambrial	107	11	57	
Sahowala	150	37	84	
Begowala	167	20	92	
Bhopalwala	168	31	56	
Mitranwali	174	33	71	
Badomali	94	10	63	
Kalaswala	150	24	43	
Daud	177	14	78	
Chawinda	178	25	94	

APPENDIX B—CONTINUED.

Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1916.	Date of extension of Vaccination Act to town.
1	2	3	4	5
GUJRANWALA DISTRICT.				
Gujranwala	1,101	259	1,011	18th October 1899.
Wazirabad	664	128	242	} Act is not in force.
Eminabad	206	44	109	
Kila Didar Singh	98	16	16	
Akalgarh	168	8	87	
Ramnagar	164	40	57	
Sohdra	215	43	40	
Hafizabad	199	20	56	
Khangah Dogran	50	8	31	
Pindi Bhattian	169	35	30	
Sangla	56	2	35	
Sharakpur	165	42	74	
Shahkot	40	2	27	
GUJRAT DISTRICT.				
Gujrat	911	156	622	6th June 1901.
Jalalpur	467	90	339	27th May 1904.
Kunjah	281	69	112	} Act is not in force.
Dinga	201	12	135	
SHAHPUR DISTRICT.				
Shahpur	152	13	62	} Act is not in force.
Sahiwal	219	48	73	
Bhera	585	176	435	3rd April 1908.
Miani	370	63	157	21st December 1915.
Khushab	468	82	311	13th December 1907.
Sargodha	244	35	143	9th February 1916.
JHELUM DISTRICT.				
Jhelum	449	90	352	27th April 1897.
Pind Dadan Khan	522	109	314	5th July 1897.
RAWALPINDI DISTRICT.				
Rawalpindi	1,767	484	1,323	10th August 1896.
Murree	51	18	24	14th December 1893.
ATTOCK DISTRICT.				
Pindigheb	383	65	209	} Act is not in force.
Hazro	342	76	216	

APPENDIX A—CONCLUDED.

Towns.	Number of births during the year.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1916.	Date of extension of Vaccination Act to town.
1	2	3	4	5
MIANWALI DISTRICT.				
Mianwali	289	53	257	April 1905.
Bhakkar	287	85	153	Act is not in force.
Isa Khel	247	42	206	October 1898.
Kalabagh	270	78	152	12th February 1912.
MONTGOMERY DISTRICT.				
Montgomery	196	40	42	} Act is not in force.
Kamalia	340	70	273	
Pakpattan	281	64	113	
LYALLPUR DISTRICT.				
Lyallpur	535	68	447	18th March 1914.
Gojra	49	3	54	Act is not in force.
JHANG DISTRICT.				
Jhang-Maghiana	1,368	413	950	20th March 1894.
Chiniot	952	273	524	Act is not in force.
MULTAN DISTRICT.				
Multan	3,586	886	2,128	18th January 1897.
Shujabad	253	78	153	24th February 1916.
MUZAFFARGARH DISTRICT.				
Muzaffargarh	147	45	31	10th December 1910.
Khangarh	142	37	49	Act is not in force.
Alipur	167	44	98	17th September 1914.
Leiah	293	91	101	January 1899.
Karor	196	47	59	Act is not in force.
DERA GHAZI KHAN DISTRICT.				
Dera Ghazi Khan	553	95	409	19th May 1895.
Jampur	311	57	164	} Act is not in force.
Dajal	274	60	208	
Rajanpur	192	45	113	
Kot Mithan	97	27	73	

APPENDIX B.

STATEMENT SHOWING THE ANNUAL NUMBER OF SUCCESSFUL VACCINATIONS AND THE ANNUAL RATIO OF DEATHS FROM SMALL-POX PER 1,000 OF POPULATION IN EACH DISTRICT OF THE PUNJAB FOR FIVE YEARS ENDING 1915-16.

No.	DISTRICTS.	1911-12.		1912-13		1913-14.		1914-15.		1915-16.		No.
		Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	Number of successful cases.	Annual ratio of deaths from small-pox per 1,000.	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Hissar ...	28,229	0.44	28,329	2.79	26,608	0.75	27,594	0.23	26,932	0.15	1
2	Rohtak ...	25,659	0.14	26,444	0.21	27,047	0.13	25,915	0.04	27,441	0.02	2
3	Gurgaon ...	22,241	0.72	23,667	1.11	25,448	0.22	24,948	0.09	22,212	0.03	3
4	Karnal ...	24,727	0.13	29,459	0.63	30,714	0.41	29,926	0.10	33,959	0.05	4
5	Ambala ...	18,870	0.24	21,824	0.99	22,874	1.72	20,726	0.17	22,880	0.06	5
6	Simla ...	702	0.05	822	0.51	973	0.17	392	0.20	496	...	6
7	Kangra ...	25,252	0.04	39,698	0.15	28,635	0.07	27,917	0.01	24,961	0.002	7
8	Hoshiarpur ...	26,443	0.06	34,392	1.19	28,392	1.16	27,980	0.10	28,374	0.03	8
9	Jullundur ...	19,428	0.10	25,777	2.81	22,064	1.22	24,992	0.06	22,556	0.06	9
10	Ludhiana ...	13,775	0.48	19,136	2.12	18,522	1.43	18,921	0.28	18,179	0.31	10
11	Ferozepore ...	31,972	0.38	29,340	6.72	30,130	1.18	31,017	0.51	29,945	0.51	11
12	Lahore ...	47,400	0.86	35,777	4.85	35,537	1.17	35,024	0.47	34,962	0.36	12
13	Amritsar ...	33,215	0.32	41,722	2.18	33,863	0.33	35,097	0.21	34,166	0.21	13
14	Gurdaspur ...	29,684	0.09	32,271	0.69	35,110	0.74	34,519	0.04	34,246	0.09	14
15	Sialkot ...	30,262	0.18	33,059	2.55	32,996	1.11	31,545	0.02	28,615	0.02	15
16	Gujranwala ...	38,054	0.32	42,844	1.60	40,955	0.28	32,428	0.02	36,451	0.01	16
17	Gujrat ...	27,852	0.46	22,625	3.89	24,164	1.08	23,467	0.03	23,130	0.01	17
18	Shahpur ...	23,386	0.70	21,959	4.62	19,505	0.92	20,003	0.05	19,858	0.03	18
19	Jhelum ...	16,503	1.69	15,668	3.07	15,053	0.23	14,255	0.01	13,807	0.01	19
20	Rawalpindi ...	19,771	1.31	25,293	2.21	20,440	0.29	17,460	0.01	16,525	0.001	20
21	Attock ...	16,245	0.34	18,553	5.33	16,654	0.97	19,799	0.01	18,014	0.003	21
22	Mianwali ...	15,475	0.34	19,462	0.66	20,153	0.50	18,216	0.06	18,318	0.03	22
23	Montgomery ...	16,194	0.63	16,569	6.36	13,173	0.43	13,633	0.12	12,909	0.13	23
24	Lyallpur ...	33,141	0.33	33,603	5.16	23,513	0.73	31,492	0.14	32,669	0.11	24
25	Jhang ...	21,789	0.09	23,279	2.30	22,887	1.29	20,686	0.02	24,200	0.01	25
26	Multan ...	41,830	0.18	42,699	0.39	32,969	0.33	30,057	0.11	30,140	0.13	26
27	Muzaffargarh ...	32,591	0.25	33,401	0.95	29,780	0.90	25,151	0.10	27,703	0.06	27
28	Dera Ghazi Khan ...	26,112	0.25	46,112	3.73	23,597	1.27	15,019	0.07	15,993	0.03	28
	Total ...	7,05,300	0.39	7,33,794	2.62	7,06,311	0.80	6,78,229	0.13	6,79,596	0.10	
	Special Staff ...	26,577	...	37,130	...	39,343	...	35,702	...	33,096	...	
	Cantonment Staff ...	3,713	0.03	3,703	0.13	4,953	0.01	4,565	...	7,089	0.01	
	Dispensary Staff ...	1,033	...	7,619	...	2,679	...	1,379	...	2,234	...	
	GRAND TOTAL ...	7,42,153	0.33	8,67,251	2.59	7,53,791	0.77	7,19,875	0.13	7,27,015	0.10	

Diagram showing the death-rates from small-pox per 10,000 of population during the year 1915-16, the average rate of mortality from small-pox during the year 1915-16 and the preceding six years in each

